**Guiding Tasks/Questions for the Process and Reflection Portfolio (PReP)**

*All Big Ideas should be covered several times. At least 15-20 tasks/questions should be given to students (either selected from the list below or from questions of your own design).*

Big Idea 1: **Q** – Question and Explore

Big Idea 2: **U** – Understand and Analyze Arguments

Big Idea 3: **E** – Evaluate Multiple Perspectives

Big Idea 4: **S** – Synthesize Ideas

Big Idea 5: **T** – Team, Transform, and Transmit

| **Task/Question** | **Month 1** | **Month 2** | **Month 3** | **Month 4** | **Month 5** | **Month 6** | **Month 7** | **Month 8** | **Month 9** | **Big**  **Idea** | **Purpose: What kind of evidence does this provide (e.g., reflection about process; documentation of research; metacognition)?** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Throughout the year, as you consider how someone who works in your field of inquiry can assist you, ask yourself these questions:  (1)  What is the most important question or set of questions that you could ask of someone working in your field of inquiry *at this stage* in your inquiry process?  (2)  Who would be the most appropriate person to whom you could ask this question or set of questions?  (3)  What is the best way to approach this person with these questions? | x | x | x | x | x | x | x | x | x | BI 5 | To engage in a community of scholars, students must learn with whom to engage, how to engage them, and what to engage them about. These questions are designed to get students to reflect on these questions before (and while) seeking out a consultant for advice. |
| Describe how discussions with your consultant are going. | x | x | x | x | x | x | x | x | x | BI 2 | Students should take advantage of the consultant’s expertise to develop strategies for understanding texts. Including author’s perspective and the implications of arguments. |
| Task: students mark sample exemplar papers, presentations, or projects using the provided rubric.  What was lacking in the sample that may have prevented full marks?  If that student had unlimited time & resources, what would have helped them improve their final product? | **X** |  |  |  |  |  |  |  |  | BI 1  BI 2 | This is focused on reflecting on how the rubric itself will be applied to their work. |
| * Identify an interesting article or news clipping that sparks an idea * Watch headline news to help identify a world issue of interest * Scour such web-sites as TEDTalks to identify issues of interest or problems that need a solution * Talk to respected leaders in the field (start with someone you know; ask for their recommendations) to ask about problems that need solving within their industries * Visit a museum * Attend a concert, play, or lecture of interest – see if these spark an idea * Read a popular press article in such magazines as *Time; Atlantic Monthly; Psychology Today* * From stimuli such as those mentioned , identify 5 themes of interest * Generate one key research question from each of these 5 themes * Pick the most interesting and relevant to you (you will be examining this from every angle for 9 months!) | **X** |  |  |  |  |  |  |  |  | BI 1 | Inquiry and investigation begin when students encounter information about ideas, complex issues and problems that stimulate their intellectual curiosity. They then continue the research process by developing a critical question about one or more of those complex issues or ideas. Seeking answers to such questions requires exploration of numerous, often competing, perspectives, and the context surrounding these perspectives; and the reliability and credibility of the perspectives. Through this exploration, students begin to develop their own perspectives, rather than simply accept those of others. They consider the purpose of their research -- what is supposed to be achieved and why. Ideally, they also develop additional questions that lead to further inquiry. The intrinsic value of asking and answering questions cannot be overstated. Giving students the opportunity to dig deeper and feed their curiosity makes for meaningful discoveries and discussions. |
| *Adapted from Wendy Luttrell, 2010*   * 2 or 3 things I know for sure… * Where I got these ideas… * How I might be wrong… * What I need to know… * Where and how I might find some answers…. | **X** |  |  |  |  |  |  |  |  | BI 1  BI 2 | Students should examine potential topics from several angles, brainstorming to think about a problem or issue and how it might be seen by others. They should engage in some preliminary research to think about different perspectives they might encounter. |
| What limitations do you foresee affecting your inquiry process? | **X** |  |  |  |  |  |  |  |  | BI 1 | Students must consider the feasibility of their task in terms of available resources or potential logistical issues. |
| Why did you choose this particular topic? | **X** |  |  |  |  |  |  |  |  | BI 1 | Describes degree of personal investment; may reveal potential for personal bias or conflict of interest |
| Prompt: Brainstorm alone and/or with a partner all the ways in which you may access information about your topic. | **X** |  |  |  |  |  |  |  |  | BI 1  BI 5 | BIs 1 (part of determining one’s approach to the inquiry to be performed) and 5 (team work to expand one’s own ideas) |
| Once you have identified your area of study and crafted at least your initial research question, create a research plan for yourself. Include a timeline, a source “wish list” and how you will break your topic into subtopics that you would like to explore. | **X** |  |  |  |  |  |  |  |  | BI 1  BI 2  BI 3 | This will show evidence of the student’s intentionality about undertaking a sustained research project. Students will show some evidence of Q and U as they use their question to explore their topic and increase their understanding of the research in the area. This “plan” should also offer evidence of the student’s increasing awareness of the multiple perspectives involved in their particular topic/question/project. (E) |
| What do you think you know about this topic? What questions or puzzles do you have? How could you explore this topic? | **X** | **X** |  |  |  |  |  |  |  | BI 1 | *Project Zero* thinking routine:  Students raise questions and begin to think about their level of understanding of the topic. |
| Write about what you would like to understand and why. What draws you to this topic? Why do you care about it? Why should other people care about it? | **X** | **X** |  |  |  |  |  |  |  | BI 1 | Students should have a personal interest or sense of curiosity about their subject, because they will have to remain committed to the exploration of this subject for several months. |
| Create a word cloud by brainstorming any idea that emerges that is somehow related to the topic , draw connections between the main idea and how it connects to each idea (is it a primary theme, secondary, etc.) | **X** | **X** |  |  |  |  |  |  |  | BI 1 | Brainstorming exercise that helps students think of many possible connections to the topic |
| Describe an instance in which you considered an idea, spent some time exploring that idea, and later determined that it was not useful for your line of inquiry. Include what the idea was, what activities you did in exploring it, and why you determined that that it would not be useful for your line of inquiry. | x | x | x |  |  |  |  |  |  | BI 2 | Analytical exercise that helps students understand that they should expect to go down pathways that result in dead ends; however, this type of journey is useful in fine-tuning their research. |
| Look to see if there are free online courses (e.g., Coursera) that relate to your topic. If there are, look at the descriptions of these courses and determine whether they would be beneficial. Write a description of your efforts in this area and include what courses you found and why you determined they would or would not be useful to you. | **X** | **X** | **X** |  |  |  |  |  |  | BI 1  BI 3 | Students should initially gather as many potential sources, and as much information, as possible. Then, they can sort through the information, analyze and evaluate it, and see what will work best for their topic. |
| What do you already know about your mentor or consultant? How can you take best advantage of his or her expertise? Create a list of specific elements of your research project that you would like your mentor or consultant to help you address. | **X** | **X** | **X** |  |  |  |  |  |  | BI 5 | This task requires the student to focus on their question and to synthesize current knowledge with that offered by a mentor or consultant. |
| For artistic works you are viewing and referencing, locate and summarize at least four critical discussions written about the work at the time of the work’s initial production/ presentation/ release, along with more current critical assessments. | **X** | **X** | **X** | **X** |  |  |  |  |  | BI 2  BI 3 | Aids student in understanding and evaluate the work of others |
| 1. Locate five sources that relate to your research question or artistic endeavor. 2. Begin constructing an annotated bibliography that you will continually update and refer back to throughout the inquiry process. Use your discipline’s citation format in constructing the annotated bibliography. When annotating each citation, be sure to do the following:  * Summarize the main question, puzzle, or idea that animates this work. * Identify the data or other information analyzed in this work. * Identify the method of inquiry in this work. * Summarize how this work informs your inquiry.  1. Finally, use the references, bibliographies, or other influences of the works that you have cited in the annotated bibliography to identify five more relevant works that you will examine (and annotate if appropriate) at a later date. | x | x | x | x | x |  |  |  |  | BI 2 | Annotated bibliographies help students understand and analyze key works in their field. (Note: Done well, recursively, they also help them begin to see how these works fit together within a larger conversation). |
| Consider possible conflicting viewpoints about the topic you are working on. Place them on a spectrum (can be as simple as a line sketch) and try to find at least one source to support 3 or more locations along that spectrum. | **X** | **X** | **X** | **X** | **X** | **X** |  |  |  | BI 3 | Students learn the importance of contemporary critical response (as opposed to current internet/blog reassessment) and can then begin to assess variance in that response while gaining a larger sense of historical and cultural context relevant to the work at time of initial release. |
| Consider your own position on your research question. How might your personal position or bias impact your research and your analysis of your research? How do you intend to address this potential issue? | x | x | x | x | x | x |  |  |  | BI 1  BI 2  BI 3 | Evidence of reflecting on personal position, evidence of understanding others’ arguments, and evaluating multiple perspectives and how personal position is related to these. |
| “Blue Sky”: if you could have access to any evidence or materials imaginable, what would they be? | x | x | x | x | x | x |  |  |  | BI 1 | Invites students to think “outside the box”; stirs imagination and creativity and can lead to unanticipated reformulations of the inquiry. |
| What is the title of your project? Why did you choose it? How have you refined it as your research has changed? | x | x | x | x | x | x |  |  |  | BI 1 | Helps students examine, evaluate, and reevaluate, their initial choice of title |
| What is the research question, or the puzzle or that underlies your inquiry? How has that changed since you began your process of inquiry? | **X** |  |  | **X** | **X** | **X** | **X** | **X** | **X** | BI 1 | Helps students examine, evaluate, and reevaluate, their initial choice of a research question |  |  |  |  |  |  |
| What do you hope to achieve by this inquiry? | **X** |  |  | **X** | **X** | **X** | **X** | **X** | **X** | BI 1  BI 3  BI 4  BI 5 | BIs: 1 (expanding boundaries, curiosity); 3 (consider gaps/shortcomings in current work); 4 (how will you do something new in this process?); 5 (transform your own and others’ thinking and communicate your work to others). Students need to consider their own place in the academic conversation they have entered into and (hopefully) will contribute to. Purpose drives many choices throughout the course (question, methods, reflection, impact on others). |
| Select two or three readings or sources that seem important for your research. How do you think your own research findings will relate to these readings or sources? For example, you may anticipate that your research will:   * Build on, extend, or add to this existing research * Poke holes in or challenge this existing research. Do you question some of the assumptions in this existing research? * Shed new light on an issue or problem because you plan to use different methods. How might your research complement this existing work? * Apply some of the methods or principles in this literature to a different context. * Fill some kind of “gap” in the literature or help answer a pressing question in the field – perhaps as identified in these pieces. How might your work inform current debates? | **X** | **X** |  |  |  |  | **X** | **X** | **X** | BI 1  BI 4 | Helps students to internalize the work of others and connect it to their own ideas |
| Which of your sources or resources was the most influential for you and in what way is this apparent in your product? Why was this the case? | **X** | **X** | **X** | **X** | **X** | **X** |  |  | **X** | BI 5  BI 4  BI 2 | Evidence of T (reflection); Evidence of S (synthesizing sources into final product); and should offer insights into U, as students move toward a full and rich understanding and analysis of their sources. |
| In your outline notes for key bibliographic texts, compile a number of key words (tags) which represent major themes or ideas you identify in those texts; you can then compile these tags into an ongoing master list and use to cross-reference other texts as you build your argument. | **X** | **X** | **X** | **X** | **X** | **X** |  |  | **X** | BI 1  BI 2 | Establishes initial baseline of expected importance; students learn to distill arguments and points made by others and to identify recurring points used by multiple authors across a number of bibliographic texts.  Demonstrates both identification and understanding of essential literature pertaining to question.  Titles should be short and descriptive; they reveal whether the project has the proper focus (the middle ground between being too general to be meaningful and so specific as to lose significance). |
| * Write a thesis statement summarizing the research problem you want to solve. What is the main research question? * Share this thesis statement with others. Is it clear to them? What clarifying questions do they ask? Revise your statement accordingly. * Begin with 3-5 articles about your topic/research question. What perspectives do these articles offer (what are their thesis statements)? * Summarize the arguments of these 5 articles. Add 5 more articles, summarize the arguments of these articles. Add more or less as needed, check in with your consultant and teacher. |  | **X** | **X** |  |  |  |  |  |  | BI 2 | Developing understanding starts with comprehension of the concepts and perspectives in question. Being able to summarize by identifying and explaining the salient ideas in a question. Being able to summarize by identifying and explaining the salient ideas in a text is foundational. When students summarize and explain an author’s perspective to others, they are building understanding. |
| Construct (or revise) an outline of your review of the relevant scholarly literature, and identify where the works you have already read or otherwise engaged will be cited within that outline. Include a bibliography to help the reader to identify the works cited throughout your outline. |  | **X** | **X** | **X** |  |  |  |  |  | BI 4 | Outlineshelp students think through the topic carefully and organize it logically before writing. They help organize and synthesize material for the reader and the student, and help in developing a coherent argument that flows well. They can be used as a skeleton of this part of the paper, one that can be “fleshed out” as students add sources, arguments, perspectives, etc. Students should be encouraged to see this as a living document. |
| Annotated bibliography |  | **X** | **X** | **X** |  |  |  |  |  | BI 2 | Annotated bibliographies help students understand and analyze key works in their field. Done well, recursively, they also help them begin to see how these works fit together within a larger conversation. |
| Using the text of your annotated bibliography, copy the text and create a Wordle (<http://www.wordle.net/>). Based on the size of the words that appear, is there evidence that:   * you might be overemphasizing certain words/perspectives in your summaries? * there are key words/concepts that you feel need to be emphasized in future exploration of your topic? * you are using extraneous words in your summaries (can you say the same thing more succinctly)? |  | **X** | **X** | **X** |  |  |  |  |  | BI 1  BI 3 | This exercise might help students expand or balance the sources they seek in addressing their inquiry question. It also provides an early check on whether all sources are of equal value to the inquiry being carried out and if the students are too wordy in their summary. |
| Inquiry often leads to dead-ends, pitfalls or failures. But we can learn from these outcomes too! What has not worked well for you so far and what did you learn from this experience? What would you tell others who are following your example to help them avoid these pitfalls? |  | **X** | **X** | **X** |  |  |  |  |  | BI 1  BI 5 | Stresses that the inquiry process is recursive: we need to consider improvements to our initial approaches and final outcomes. |
| * Build your research article reservoir by preparing two columns: one that supports your thesis statement, one that contradicts your thesis statement, perhaps one that straddles the fence. * Ask yourself: What do the articles in the ***support*** column have in common? What common themes emerge? Did the perspectives change over time, as new concepts or theories emerged? Do the same with articles in the ***contradicts*** column. * Check to see if other disciplines have weighed in on this issue. You may find another interesting perspective that you did not anticipate, e.g. How would a biologist approach this problem? A business person? A politician? An activist from the green party? An artist? A historian? A soldier? * Revisit your thesis statement/research question.   As an option, consider including a “qualitative component” to your research by perhaps conducting interviews or taking polls on your issue to see what popular opinion has to say on the topic. Check with your consultant on constructing a quick survey or questionnaire, and/or sampling. |  |  | **X** | **X** |  |  |  |  |  | BI 3 | Students build a sense of confidence in their knowledge of a topic by exploring the topic from multiple perspectives and evaluating the usefulness of those perspectives in answering the initial research question. |
| CONNECT - how does what you’ve learned so far connect to what you already knew or thought about this topic?  EXTEND - how has your work so far extended what you already knew, thought or felt?  CHALLENGE - What challenges, puzzles, questions, or concerns do you have right now about your research project? |  |  | **X** | **X** |  |  |  |  |  | BI 1  BI 4 | *Project Zero* thinking routine to help students explore their topic and synthesize others’ ideas |
| If you could ask any expert in the world a question about your project, what would the question be and whom would you ask? |  |  |  | **X** | **X** | **X** |  |  |  | BI 2  BI 3 | Helps students to think deeply about the level of expertise required to address their research question and to reflect about whether their research question is robust |
| Physical activity boosts creativity. Beethoven composed music while walking in the woods. Apple co-founder Steve Jobs said his most inspired ideas came to him while hiking. Even the fictional protagonist of the movie *Akeela and the Bee* became a spelling-bee champ by learning words while jumping rope.  Try this experiment: Bring one of your favorite forms of exercise/physical activity into your inquiry process. (e.g., Take a run, swim, or bike ride when you’re stuck on a problem or question.) What did you try, and how did it work? |  |  |  | **X** | **X** | **X** |  |  |  | BI 2  BI 3  BI 4 | Physical activity helps deepen understanding, engage with/evaluate competing arguments (multiple perspectives), and synthesize complex ideas. |
| Describe the most unusual idea or method you thought of so far related to your project. Was this idea useful for your line of inquiry? |  |  |  | x | x | x | x | x | x | BI 3 | Students evaluate others’ arguments, thereby strengthening their own point of view about their topics. |
| Describe an instance in which an idea popped in your mind while you were doing something besides working on your project. Include what you were doing when the idea came to you and what the idea was. |  |  |  | x | x | x | x | x | x | BI 2 | Helps students free the creative side of their brains by connecting brainstorming activity to their research question |
| Explain different means you have used to determine whether an idea or approach will be useful to your project. Include specific examples. |  |  |  | x | x | x | x | x | x | BI 2 | Helps students explore many possible ways to gather information. |
| Seek out a peer also conducting a research project but in an unrelated field or subject. After conducting a peer review session with them, reflect on the most useful feedback you received from them. How did this or how will this influence your project? |  |  |  | x | x | x | x | x | x | BI 1  BI 4  BI 5 | Evidence of Q as students analyze question or understanding based on peer feedback. U as it furthers their understanding of research and issue from outside perspective. A goal of S for student to synthesize feedback into their project progress and T as student must both reflect and work as a team with peers for effective feedback. |
| Create and revise an outline or map to show the key statements of your argument in a logical numbered sequence. Include references to relevant bibliographic sources and argument key words (tags) that show the major themes/ideas these sources provide. |  |  |  | **X** | **X** | **X** | **X** | **X** | **X** | BI 4 | Helps students prioritize and organize their arguments |
| In groups, use a Ladder of Feedback protocol and then write a reflection on what you learned from other people responding to your work (See <http://www.makinglearningvisibleresources.org/ladder-of-feedback-see-supporting-learning-in-groups-in-the-classroom.html> or <http://www.ronritchhart.com/COT_Resources_files/ladder%20of%20feedback_RRrevision.pdf>) |  |  |  |  |  |  | **X** | **X** |  | BI 5 | Helps students gather feedback from peers to revise and improve their work |
| When revising an original artistic work, attempt to summarize revised versions (identified by date or number), listing major changes made, reasons for changes, and sketching the relation of these changes to developing aesthetic rationale. |  |  |  | **X** | **X** | **X** | **X** | **X** | **X** | BI 4 | Helps students analyze their revision process and strengthen rationales for how they approach their work |
| Write a draft of the text for a scholarly blog post that you might write about your work (you can actually blog on-line, or write this out in your PReP). Be sure that...   * it engages a general-interest audience, but maintains a professional approach * it clearly identifies the point of your inquiry, or the key puzzle to be addressed * it provides links to works that influence your inquiry or your thought process, as well as to important source material, data or other information. |  |  |  |  |  |  | **X** | **X** | **X** | BI 5 | Blogging forces students to communicate their ideas and results of the inquiry process to a more general audience, and in a way that allows for creativity of presentation. However, students need to reflect on how a scholarly blog differs from non-scholarly ones, and how a blog’s ability to link directly to other works or source material can enhance or support one’s presentation and lend it more validity. |
| In preparation for the final presentation of a new artistic work, devise and revise a check-list of tasks which must be completed in order to present successfully--e.g. booking space, securing equipment, arranging for presence of assistants, etc. |  |  |  |  |  |  | **X** | **X** | **X** | BI 4  BI 5 | Students begin to develop metacritical skills in relation to their own ongoing refinement of an original art work. In the process, students are able to articulate their aesthetic rationale to themselves and others more clearly and effectively. |
| * Continue to build your arguments, adding literature as necessary to make strong points you can defend. * Place your writings in field-specific format with an introduction, method/procedure, results, and conclusions. * Get feedback along the way. * Are your ideas clear? Do they follow a line of reasoning? * Revisit your thesis statement/research question. Is there still a clear connection? * Record yourself presenting your paper. Critique your work. How can you engage your audience? * Practice, practice, practice in front of others, as well as alone. * Feel comfortable with the material. Make it your own. Connect it to something in your own life. The personal connection will help in your presentation. * Make a super bowl commercial of your paper – SELL your idea. Convince others that your perspective is the right one. |  |  |  |  |  |  | **X** | **X** | **X** | BI 5 | Students strengthen their arguments, polish their formatting, and solicit opinions to improve their work. |
| One of the goals of AP Research is that students will have a transformative experience of becoming more insightful thinkers and scholars. In what specific ways have you acquired new habits of critical thinking and inquiry? |  |  |  |  |  |  |  | **X** | **X** | BI 5  BI 1  BI 2  BI 4 | The concept of “transform” from BI 5, not only with regard to the project/writing being transformed through peer review and audience feedback, but also the scholar himself/herself being changed through the process.  This is also a recursive look at BIs 1 and 2--the questioning and exploring and the understanding and analyzing that are foundational to the process of inquiry.  BI 4 might enter in here too; the synthesizing of ideas is a sophisticated skill that is only developed through habits of critical thinking. |
| Build a support team and learn about the practical, essential tasks required for: 1) dynamic oral presentations that require vocal skills or emphatic gestures or 2) public presentation of artistic products within a theater, gallery, or screening room. |  |  |  |  |  |  |  | **X** | **X** | BI 5 | Helps students analyze logistics of presentation through consulting knowledgeable individuals |
| How have your expectations of research or creative work changed over this academic year? Think particularly about how your thinking now compares to what you planned initially (or to what you wrote in the first part of this PReP). |  |  |  |  |  |  |  | **X** | **X** | BI 1  BI 2 | This is a recursive look at BIs 1 and 2--the questioning and exploring and the understanding and analyzing that are foundational to the process of inquiry. |
| How have you grown as a researcher, writer, and/or artist as a result of this inquiry process? |  |  |  |  |  |  |  |  | **X** | BI 2 | Understand and Analyze--not only in terms of the topical information, but also in terms of oneself as a scholar. |
| What is the importance/value of conducting research? i.e., Why would someone take the AP Research course? |  |  |  |  |  |  |  |  | **X** | BI 1  BI 5 | Meta-reflection on the course’s purpose |
| I used to think…. (about the topic or the research process)  Now I think….(about the topic or the research process) |  |  |  |  |  |  |  |  | **X** |  | Reflection on the research process |
| What was the first draft of your research question? How did it change from the first version to the final version on which you settled? What was the most important factor contributing to this shift? |  |  |  |  |  |  |  |  | **X** | BI 5 | Evidence of T - however, the T (reflection) will be about the other elements of the QUEST...their question, their understanding of their research, their evaluation of the many different perspectives present it their area of research, and a synthesis of all of those voices. |